

**Commonwealth of Kentucky
Environmental and Public Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382**

Final

**AIR QUALITY PERMIT
Issued under 401 KAR 52:020**

Permittee Name: Alcan Primary Products Corporation
Mailing Address: P.O. Box 44, 9404 Highway 2096
Henderson, KY 42419

Source Name: Same as above
Mailing Address: Same as above

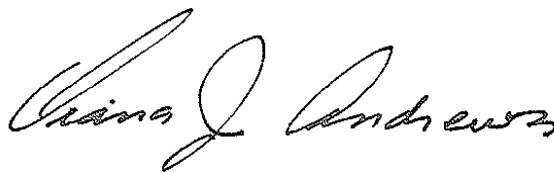
Source Location: 9404 Highway 2096
Henderson, KY 42419

Permit Number: V-05-088
Source A. I. #: 1788
Activity #: APE20050007
Review Type: Title V/Operating/Synthetic Minor
Source ID #: 21- 101 - 00029

Regional Office: Owensboro Regional Office
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Owensboro, KY 42303-2191
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County: Henderson

Application
Complete Date: December 7, 2005
Issuance Date: April 3, 2007
Revision Date:
Expiration Date: April 3, 2012



**John S. Lyons, Director
Division for Air Quality**

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Definitions: The following definitions apply to all abbreviations and variables used in this permit:

PT – total particulate matter
 PM₁₀ – particulate matter equal to or smaller than 10 micrometers
 CO – carbon monoxide
 NO_x – nitrogen oxides
 SO₂ – sulfur dioxide
 Pb – lead
 VOC – volatile organic compounds
 D/F – dioxin/furan
 HCl – hydrochloric acid
 POM – polycyclic organic matter

| Rev # | Permit type | APE# | Complete Date | Issuance Date | Summary of Action |
|--------------|---------------------------------|-----------------|----------------------|----------------------|--|
| ---- | Initial Issuance | 20050007 | 12/07/05 | 04/03/07 | Permit issuance |
| ---- | Administrative Amendment | 20060003 | 8/21/06 | | <ol style="list-style-type: none"> 1. Site-specific OM&M plan for group 1 and group 2 furnaces was incorporated to the section D in the permit. 2. Typo error was corrected. A7(90) was changed to A6(90). |

SECTION A – PERMIT AUTHORIZATION

Pursuant to a duly submitted application, which was determined to be complete on December 7, 2005, the Kentucky Division for Air Quality hereby authorizes the construction and operation of the equipment described herein in accordance with the terms and conditions of this permit.

The permittee shall not construct, reconstruct, or modify any affected facilities without first having submitted a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in Regulation 401 KAR 52:020, Title V Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

SUBJECT ITEM 1 REQUIREMENTS: Existing Process Sources

| Unit # | Unit Name | Material | Rate (tons /year) | Construction Date |
|-----------------|-------------------------------------|--------------------------------|--------------------------|--------------------------|
| A1 (T1-T3) | Barge Unloading | Raw Material | 585,562 total | August 4, 1972 |
| B4 (S7, S8) | Reacted Alumina Storage (2) | Reacted Alumina | 140,160 each | August 4, 1972 |
| G8 (I9) | Ingot Casting Dross Loading | Dross | 5,820 | August 4, 1972 |
| M1(E9) | Anode Mix Hopper | Anode Raw Materials (No POM) | 127,020 | December 12, 1972 |
| Q4 (EG) | Anode Rod Cleaning | Shot Blast Material | 29,143 | December 31, 1972 |
| K1 (P1(23)) | Bath Crushing/Crucible Cleaning | Anode Cover | 54,137 | 1972 |
| U1 (5P) | Bath Transfer to Storage Processing | Anode Cover | 54,137 | January 1, 1972 |
| Q1 (EF) | Electric Arc Furnace (1) | Charge Materials | 168 TPY Backup | December 31, 1972 |
| A8 (T4) | Material Transfer | Alumina/Coke | 585,562 | August 4, 1972 |
| A2 (S1, S2, S3) | Alumina Storage | Alumina | 417,064 total | August 4, 1972 |
| B6 (S4, S5) | Ore Storage | Unreacted Alumina | 140,160 each | August 4, 1972 |
| C1 (T5) | Material Transfer Rail Car | Alumina, Fluoride, Coke | 193,970 | August 4, 1972 |
| C2 (T6, 2S) | Aluminum Fluoride | AlF3 | 3,800 Total | August 4, 1972 |
| C4 (T7, T8, T9) | Coke Handling | Petroleum Coke | 193,970 total | August 4, 1972 |
| C6 (3S, 4S) | Coke Handling | Petroleum Coke | 96,985 each | August 4, 1972 |
| J1 (E1) | Butt Surge Tank | Anode Butts | 70,000 | August 4, 1972 |
| K7 (E6) | Coke Crushing | Petroleum Coke | 193,970 | December 31, 1972 |
| L1 (E7) | Coke Ball Mill | Petroleum Coke | 193,970 | December 31, 1972 |
| L3 (E8) | Coke Fines Handling | Petroleum Coke | 193,970 | December 31, 1972 |
| U2 (CI7) | Green Anode Dust Collector | Intermediate Coke | 17,000 | December 31, 1972 |

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

| Unit # | Unit Name | Material | Rate (tons /year) | Construction Date |
|---------|---------------------|---------------------|-------------------|-------------------|
| K5 (E5) | Butt Impactor | Anode Butts | 70,000 | December 31, 1972 |
| J2 (E2) | Anode Butt Cleaning | Shot Blast Material | 10,744 | Aug 4, 1972 |

* Emissions from all units controlled by baghouses.

APPLICABLE REGULATIONS:

401 KAR 61:020 Existing process operations is applicable to unit which were constructed before July 2, 1975

1. Operating Limitations:

- a. See **SECTION D 1. on page 32** below.
- b. The associated control device(s) shall be operated all the time when the units are operating.
Compliance Demonstration: Records shall be kept of the times when the units are operating but the control devices are not. Records shall also be kept of the maintenance activities.

2. Emission Limitations:

- a. **Opacity Standard:** Visible emissions from each stack or vent associated with the emission units listed above shall not equal or exceed 40% opacity.
Compliance Demonstration: Compliance with the opacity limits described above shall be determined through monitoring, maintenance of the records and annual Method 9 readings.
- b. **PM Standards:**
 - i. For emission units K1 and U1, particulate emissions shall not exceed a maximum exit particulate emission concentration of 0.02 grains per standard cubic foot. Addition of dilution air shall not constitute compliance.
Compliance Demonstration: Compliance with the limits described above shall be determined by annual testing of the particulate emissions from the K1 and U1 stacks. Annual testing must be completed within the first 12 months following issuance of this permit.
 - ii. Except for emission units K1 and U1, hourly particulate emissions shall not exceed the following limits:
 - For process weights < 0.5 tons/hour: 2.58 lbs/hour
 - For process weight < 30 tons/hour: $E'_{PM_j} = 4.10P_j^{0.67}$
 - For process weights ≥ 30 tons/hour: $E'_{PM_j} = (55.0P_j^{0.11}) - 40$

Where j is the unit, E'_{PM_j} is the allowable particulate emission rate for unit j (pounds/hour) and P_j is the average process weight for unit j (tons/hour).

Compliance Demonstration: Compliance with the hourly particulate emission limits described above shall be determined by comparing the allowable rate to the actual rate as calculated below:

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

$$E_{PM_{ij}} = \frac{P_{ij} \cdot EF_{PM_j}}{h_{ij}} \cdot \left(1 - \frac{CE_j}{100}\right)$$

Where i is the month, j is the unit, $E_{PM_{ij}}$ is the actual average hourly particulate emission rate from unit j during month i (pounds/hour), P_{ij} is the actual specific operating parameter for month i (units/month), EF_{PM_j} is the overall uncontrolled KYEIS particulate emission factor for unit j (pounds/unit), h_{ij} is the actual total hours of operation for unit j during month i (hours/month) and CE_j is the overall control efficiency (%) of any air pollution control equipment associated with unit j.

3. Testing Requirements:

- a. For emission points K1 and U1, the permittee shall measure particulate concentrations at both the inlet and outlet of the control device during the annual Method 5 test in order to determine both the emission rate and the actual control efficiency of the associated baghouse. Annual testing must be completed within the first 12 months following issuance of this permit.
- b. To determine compliance with visible emission limits, the permittee shall perform annual Method 9 readings on each stack, vent or control device associated with the units listed above.

4. Specific Monitoring Requirements: For each emission unit listed above, the permittee shall monitor the following parameters:

- a. Monthly total hours of operation.
- b. Monthly total material processed (except for K1 and U1).
- c. Hourly pollutant emission rates.
- d. Flow rate-based pollutant emission rates.
- e. For each stack, vent or control system:
 - i. Monthly observations of visible emissions during operation of associated equipment.
 - ii. Observations of visible emissions during all periods of control equipment malfunction.
If visible emissions are seen during the observation, Method 9 shall be used to determine the opacity.
 - iii. Annual Method 9 readings during operation of associated equipment.

5. Specific Recordkeeping Requirements: For each emission unit listed above, the permittee shall maintain records of the following information:

- a. Monthly total hours of operation.
- b. Monthly total material processed.
- c. Hourly pollutant emission rates.
- d. Flow rate-based pollutant emission rates.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- e. For each stack, vent or control system, a log of all visible emission observations. If visible emissions are observed, the log shall indicate:
 - i. Method 9 readings if any visible emissions are seen.
 - ii. The cause of the abnormal visible emissions.
 - iii. Any corrective actions taken.
- f. For each stack, vent or control system, records of the annual Method 9 readings.

6. Specific Reporting Requirements:

- a. If any operating or emission limit on a specific unit or operational group is exceeded more than 6 times in a specified semi-annual reporting period (as defined in **SECTION F 6.** below), the permittee shall submit a corrective action plan to the Owensboro Regional Office for the Division's approval no later than 30 days from the due date of the semi-annual report.
- b. With the exception of specific reporting requirements outlined above, the permittee shall report exceedances of any operating or emission limit specified in this permit to the Division's Owensboro Regional Office as described in **SECTION F 8.** below.

7. Specific Control Equipment Conditions:

- a. For emission units K1 and U1, the associated control equipment must achieve at least 97% actual control efficiency.
- b. See **SECTION D 2. on page 32** below.

8. Compliance Certification: See **SECTION D 3. on page 32 below.**

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

SUBJECT ITEM 2 REQUIREMENTS: New Process Sources

| Unit # | Unit Name | Material | Rate (tons /year) | Construction Date |
|----------------|--|-----------------------|-------------------|---|
| Q2 (EF) | Electric Induction Furnaces (3) (see operating limitation) | Cast Iron | 9,360 | Dec 6, 1989 (No. 1 and No. 2), Jan 2006 (No. 3) |
| A6 (89) | Re-Melt Furnace | Aluminum | 54,750 | July 29, 1999 |
| B5 (S9) | Reacted Alumina Storage | Alumina | 140,160 | August 4, 1979 |
| U3 (EJ) | Central Anode Butts Cleaning | Anode Butts | 80,000 | December 31, 1990 |
| B7 (S6) | Ore Storage | Unreacted Alumina | 140,160 | July 28, 1977 |
| J3 (E3) | Butt Stripping/Crushing | Anode Butts | 70,000 | July 28, 1977 |
| K3 (E4) | Butt Crushing | Anode Butts | 70,000 | June 19, 1979 |
| E6 (EL) | Transloading Spent Potliner and Sandblasting Operations | Spent Potliner | 180,136 | October 1, 1995 |
| E8 (EM) | Building (138) Vacuum System | Potliner Process Area | 229 | June 17, 1995 |
| U4 (EQ1) | Anode Saw Dust Collector | Anode | 120,888 | 2004 |
| U5 (EO 72, 73) | Pitch Storage Tanks | Coal Tar | 19,000 | 1977 |

* Emissions from all units controlled by baghouse(s).

APPLICABLE REGULATIONS:

401 KAR 59:010 New process operations (on or after July 2, 1975)

40 CFR Part 63 Subpart RRR Secondary aluminum production NESHAP applies to the Re-Melt Furnace. The Re-Melt furnace is classified as a Group 2 furnace pursuant to Subpart RRR.

1. Operating Limitations: See **SECTION D 1. on page 32** below.

- The permittee shall not operate more than two electric induction furnaces at one time.
[Synthetic Minor Limit]
- The permittee shall not exceed a total annual induction furnace process rate of 9,360 tons of cast iron production per year. [Synthetic Minor]
- The associated control device(s) shall be operated all the time when the units are in operation.
Compliance Demonstration: Records shall be kept of the times when the units are operating but the control devices are not. Records shall also be kept of the maintenance activities.
- The associated control device(s) must achieve at least 99% actual overall control efficiency.

Compliance Demonstration: See Record Keeping Requirement below.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

e. Melt furnace: Pursuant to Table 2 to 40 CFR 63 Subpart RRR, the permittee shall post identification, operating parameter ranges and operating requirements at affected source and emission unit(s).

2. Emission Limitations:

a. **Opacity Standard:** Visible emissions from each stack or vent associated with the emission units listed above shall not equal or exceed 20% opacity.

Compliance Demonstration: Compliance with the opacity limits described above shall be determined through monitoring, maintenance of the records and annual Method 9 readings.

PM Standard: For emission unit listed above hourly particulate emissions shall not exceed the following limits:

- For process weights < 0.5 tons/hour: 2.34 lbs/hour
- For process weight < 30 tons/hour: $E'_{PM_j} = 3.59P_j^{0.62}$
- For process weights ≥ 30 tons/hour: $E'_{PM_j} = (17.31P_j^{0.16})$

Where j is the unit, E'_{PM_j} is the allowable particulate emission rate for unit j (pounds/hour) and P_j is the average process weight for unit j (tons/hour).

b. **Compliance Demonstration:** Compliance with the hourly particulate emission limits described above shall be determined by comparing the allowable rate to the actual rate as calculated below:

$$E_{PM_{ij}} = \frac{P_{ij} \cdot EF_{PM_j}}{h_{ij}} \cdot \left(1 - \frac{CE_j}{100}\right)$$

Where i is the month, j is the unit, $E_{PM_{ij}}$ is the actual average hourly particulate emission rate from unit j during month i (pounds/hour), P_{ij} is the actual specific operating parameter for month i (units/month), EF_{PM_j} is the overall uncontrolled KYEIS particulate emission factor for unit j (pounds/unit), h_{ij} is the actual total hours of operation for unit j during month i (hours/month) and CE_j is the overall control efficiency (%) of any air pollution control equipment associated with unit j.

c. To preclude the applicability of PSD, PM-10 emissions must be less than 15 tons per rolling twelve month period for induction furnace #3.

3. **Testing Requirements:** To determine compliance with visible emission limits, the permittee shall perform annual Method 9 readings on each stack, vent or control device associated with the units listed above.

4. **Specific Monitoring Requirements:** For each emission unit listed above, the permittee shall monitor the following parameters:

- a. Monthly total hours of operation.
- b. Monthly total material processed.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- c. Hourly pollutant emission rates.
- d. For each stack, vent or control system:
 - i. Monthly observations of visible emissions during operation of associated equipment.
 - ii. Observations of visible emissions during all periods of control equipment malfunction.
If visible emissions are seen during the observation, Method 9 shall be used to determine the opacity.
 - iii. Annual Method 9 readings during operation of associated equipment.

5. Specific Recordkeeping Requirements: For each emission unit listed above, the permittee shall maintain records of the following information:

- a. Monthly total hours of operation.
- b. Monthly total material processed.
- c. Hourly pollutant emission rates.
- d. For each stack, vent or control system, a log of all visible emission observations. If visible emissions are observed, the log shall indicate:
 - i. Method 9 readings if any visible emissions are seen.
 - ii. The cause of the abnormal visible emissions.
 - iii. Any corrective actions taken.
- e. For each stack, vent or control system, records of the annual Method 9 readings.
- f. Re-Melt furnace: Pursuant to 40 CFR 63.1510(r)(1), the permittee shall record a description of the materials charged to each furnace, including any nonreactive, non-HAP-containing/non-HAP-generating fluxing materials or agents.

6. Specific Reporting Requirements:

- a. If any operating or emission limit on a specific unit or operational group is exceeded more than 6 times in a specified semi-annual reporting period (as defined in **SECTION F 6.** below), the permittee shall submit a corrective action plan to the Owensboro Regional Office for the Division's approval no later than 30 days from the due date of the semi-annual report.
- b. With the exception of specific reporting requirements outlined above, the permittee shall report exceedances of any operating or emission limit specified in this permit to the Division's Owensboro Regional Office as described in **SECTION F 8.** below.
- c. Re-Melt furnace: Pursuant to 40 CFR 63.1510(r)(2), submit a certification of compliance with the applicable operational standard for charge materials in 40 CFR 63.1506(o) for each 6-month reporting period. Each certification must contain the information in 40 CFR 63.1516(b)(2)(v).

7. Specific Control Equipment Conditions: See **SECTION D 2.** on page 32 below.**8. Compliance Certification:** See **SECTION D 3.** on page 32 below.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**SUBJECT ITEM 3 REQUIREMENTS: Heat Exchangers**

| Unit # | Unit Name | Fuel | Rate (MMBTU/hour) | Construction Date |
|---------|--|-------------|-------------------|-------------------|
| S5 (EI) | Indirect Heat Exchanger – (Electrode Boiler) | Natural Gas | 12.5 | December 31, 1972 |
| S6 (EI) | Indirect Heat Exchanger | Natural Gas | 12.5 | December 31, 1972 |

APPLICABLE REGULATIONS:**401 KAR 59:015** New indirect heat exchangers (on or after April 9, 1972)

40 CFR 63 Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Industrial/Commercial/Institutional Boilers and Process Heaters

1. Operating Limitations: See **SECTION D 1.** on page 32 below.**2. Emission Limitations:****a. Opacity Standard:**

- i. Visible emissions from each stack or vent associated with the emission units listed above during normal operations shall not exceed 20% opacity (based on a six minute average).
- ii. A maximum of 40% opacity (based on a six minute average) shall be permissible for not more than 6 consecutive minutes in any consecutive 60 minutes during fire-box cleaning or while blowing soot.

Compliance Demonstration: While burning natural gas, this unit is considered to be in compliance with opacity standards.**b. PM Standards:** Particulate emissions shall not exceed the following limits:

| Unit # | Unit Name | P _{hri} (lbs/MMBTU) |
|---------|--|---------------------------------|
| S5 (EI) | Indirect Heat Exchanger – (Electrode Boiler) | 0.531 |
| S6 (EI) | Indirect Heat Exchanger | 0.531 |

Compliance Demonstration: While burning natural gas, this unit is considered to be in compliance particulate standards.**c. SO₂ Standards:** Sulfur dioxide emissions shall not exceed the following limits:

| Unit # | Unit Name | P _{hri} (lbs/MMBTU) |
|---------|--|---------------------------------|
| S5 (EI) | Indirect Heat Exchanger – (Electrode Boiler) | 2.74 |
| S6 (EI) | Indirect Heat Exchanger | 2.74 |

Compliance Demonstration: While burning natural gas, this unit is considered to be in compliance sulfur dioxide standards.**3. Testing Requirements:** N/A

**SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS,
AND OPERATING CONDITIONS (CONTINUED)**

4. **Specific Monitoring Requirements:** N/A
5. **Specific Record keeping Requirements:** N/A
6. **Specific Reporting Requirements:**
 - a. The permittee shall comply with the reporting requirements of 40 CFR 63 Subpart DDDDD.
7. **Specific Control Equipment Conditions:** See SECTION D 2. on page 32 below.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**SUBJECT ITEM 4 REQUIREMENTS: Potlines (3)**

| Unit # | Unit Name | Control | Construction Date |
|---------------------|-----------|--|-------------------|
| E1 (P2, P3, P4, P5) | Potline 1 | Dry scrubber/baghouse for reactors, pot hood (roof monitor) for potroom. | August 1972 |
| E3 (P6, P7, P8, P9) | Potline 2 | | August 1972 |
| E5 (1P, 2P, 3P, 4P) | Potline 3 | | August 1979 |

APPLICABLE REGULATIONS:**401 KAR 61:165** Existing primary aluminum reduction plants**40 CFR 63 Subpart LL** Primary Aluminum Production NESHAP**1. Operating Limitations:**

- a. The permittee shall install and operate a device that measures and records the weight of all materials fed/charged and/or aluminum produced and ensure that the device is calibrated according to manufacturer's specifications.
- b. The permittee shall install, operate, calibrate, and maintain a continuous parameter monitoring system for each emission control device. The permittee shall specify and provide the basis or rationale for selecting parameters to be monitored and the associated operating limits for the emission control device.
- c. If a monitoring device for a primary control device measures an operating parameter outside the limits established pursuant to 40 CFR 63.847 (h) or if visible emissions indicating abnormal operation are observed from the exhaust stack of a control device during daily inspections, the permittee shall initiate the corrective action procedures identified in the startup, shutdown, and malfunction plan within 1 hour. Failure to initiate the corrective action procedures within 1 hour or to take the necessary corrective actions to remedy the problem is a violation.
- d. The permittee shall install, operate, and maintain ambient air monitoring equipment for the detection of fluorides. This equipment shall be located at sites specified by the Division if requested.
- e. See **SECTION D 1. on page 32** below.
- f. The associated control device(s) shall be operated all the time when the units are in operation.

Compliance Demonstration: Records shall be kept of the times when the units are operating but the control devices are not. Records shall also be kept of the maintenance activities.

2. Emission Limitations:

- a. ***Opacity Standard:*** Visible emissions from Potline 1,2, and/or 3 shall not exceed the following limits:
 - i. 10 % opacity from any potroom roof monitor during normal operations. (Potlines 1,2 & 3)
 - ii. 40 % opacity from any potroom roof monitor located directly above sick cells or startup cells. (Potlines 1 & 2 only)
 - iii. 10 % opacity from any dry scrubbing plant primary control system. (Potlines 1,2, &3)

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration: Compliance with the opacity limits described above shall be determined through monitoring, maintenance of the records and annual Method 9 readings.

- b. **TF Standard:** Total fluoride (TF) emissions shall not exceed 1.9 lbs/ton aluminum produced (or 1.6 lb/ton aluminum produced if emission averaging is used).

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual monthly average as calculated below:

$$E_{FP} = \frac{(C_1 \cdot Q_1) + (C_2 \cdot Q_2)}{(453600 \cdot P_i)} \quad P_i = \frac{P'_i}{h_i}$$

Where i is the month, E_{FP} is the actual production-based emission rate of total fluorides based on a monthly average (pounds/ton), C_1 is the average total fluoride concentration in the primary control system effluent gas as determined through the annual testing required **3. Testing Requirements** below (milligrams/dry standard cubic foot), Q_1 is primary control system effluent gas flow rate (dry standard cubic feet/hour), C_2 is the total fluoride concentration in the roof monitor effluent gas as determined through the monthly testing required **3. Testing Requirements** below (milligrams/dry standard cubic foot), Q_2 is roof monitor effluent gas flow rate (dry standard cubic feet/hour), P_i is the monthly average aluminum production rate during month i (tons/hr), P'_i is the actual total aluminum production during month i (tons) and h_i is the total monthly hours of operation during month i (hours).

- c. Sulfur Dioxide emissions (see Section D Item #4)

3. Testing Requirements:

- a. Thirty days prior to the initial performance test, the permittee shall submit to the Division for approval a site-specific test plan. The plan shall include:
 - i. Procedures for conducting initial and subsequent performance tests as required in 40 CFR 63.848.
 - ii. Procedures to ensure that a minimum of three test runs are performed annually for the primary control system for each source.
 - iii. Procedures to ensure that secondary emissions testing will occur according to the frequency established below:
 - At least one run performed before the 15th of the month,
 - At least one run performed after the 15th of the month,
 - There are at least six days between two of the runs during the month;
 - iv. Should the permittee wish, an alternate procedure where measured TF emissions from one potline can be used to estimate emissions from other potlines provided the permittee can demonstrate that the reference potline is similar in operation and production to the untested potlines.
- b. Following approval of the site-specific test plan, the permittee shall conduct an initial performance test during the first month following the compliance date.
- c. If a performance test has been conducted on the primary control system within the 12 months prior to the compliance date, the results of that performance test may be used to determine initial compliance.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- d. Following the initial performance test, the permittee shall submit to periodic testing as prescribed in the site-specific test plan:
 - i. For each primary control system, the permittee shall perform at least three emission test runs per year.
 - ii. For each source of secondary emissions, the permittee shall perform at least three emission test runs per month.
 - iii. If the permittee has performed more than three tests of primary control system during the previous 12 consecutive months, the average of all runs performed in the previous 12-month period shall be used to determine the contribution from the primary emission control system.
- e. The initial performance test and all subsequent performance tests shall be conducted in accordance with the requirements of the general provisions in 40 CFR Part 63 Subparts A, the procedures in 40 CFR Part 63 Subpart LL and the approved test plan.
- f. The permittee shall use the reference methods listed 40 CFR 63.849 to determine compliance with the applicable emission limits for TF.
- g. To determine compliance with visible emission limits, the permittee shall perform annual Method 9 readings on each stack, vent or control device associated with the units listed above.

4. Specific Monitoring Requirements: For each emission unit listed above, the permittee shall monitor the following parameters:

- a. Monthly total hours of operation.
- b. Monthly total aluminum production.
- c. Production-based pollutant emission rates.
- d. Weight measurement device calibrations.
- e. Procedures for the proper operation and maintenance of monitoring device(s) or system(s) used to determine compliance, including:
 - i. The permittee shall submit recommended accuracy requirements to the DAQ for review and approval. [40 CFR 63.848 (k)]
 - ii. All monitoring devices must be certified by the permittee to meet the accuracy requirements and must be calibrated in accordance with the manufacturer's instructions. [40 CFR 63.848 (k)]
- f. Primary control system TF emissions (based on annual average of at least 3 runs or alternate schedule authorized by the Division).
- g. Secondary TF emissions (based on monthly average of at least 3 runs or alternate schedule authorized by the Division).
- h. Ambient air monitoring results.
- i. For each control system:
 - i. Operating parameters.
 - ii. Daily visual inspections of the equipment.
 - iii. Daily visual qualitative visual observation of visible emissions from each control device exhaust stack.
- j. For each stack, vent or control system:
 - i. Daily observations of visible emissions during operation of associated equipment.
 - ii. Observations of visible emissions during all periods of control equipment malfunction.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

iii. Annual Method 9 readings during operation of associated equipment.

5. Specific Record keeping Requirements: The permittee shall maintain records of the following information:

- a. Monthly total hours of operation.
- b. Monthly total aluminum production.
- c. Production-based pollutant emission rates.
- d. Primary control system TF emission tests.
- e. Secondary TF emission tests.
- f. The portion of TF measured as particulate matter and the portion that is measured as gaseous when the particulate and gaseous fractions are quantified separately using an approved test method.
- g. If emission averaging is used, the current implementation plan for emission averaging and records supporting monitoring of similar potlines and demonstrating that the performance of similar potlines is the same as or better than that of potlines sampled by manual methods.
- h. Documentation of corrective actions taken when any operating parameter limits are exceeded.
- i. Ambient air monitoring results.
- j. For each control system:
 - i. Operating parameters.
 - ii. Daily visual inspections of the equipment.
 - iii. Daily visual qualitative visual observation of visible emissions from each control device exhaust stack.
- k. For each stack, vent or control system, a log of all visible emission observations. If visible emissions are observed, the log shall indicate:
 - i. Method 9 readings if any visible emissions are seen.
 - ii. The cause of the abnormal visible emissions.
 - iii. Any corrective actions taken.
- l. For each stack, vent or control system, records of the annual Method 9 readings.
- m. Current startup, shutdown and malfunction (SS&M) plan.

6. Specific Reporting Requirements:

- a. The permittee shall submit to the Division:
 - i. Notification of initial performance test, initial compliance status and compliance approach.
 - ii. The results of any stack test conducted at the source within 45 days of the completion of any fieldwork associated with the test.
 - iii. An annual summary of all performance tests.
- b. The permittee shall submit to the Division quarterly excess emission reports (EER, excess emissions shall be defined as any measured emission rate in excess of the limits specified in this permit) postmarked by the thirtieth (30th) day following the end of each quarter and containing the following information:
 - i. Periods and magnitudes of excess emissions.
 - ii. Nature and cause of each period of excess emissions.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- iii. Periods during which the continuous monitoring system was inoperative.
- iv. Records of calibration checks, adjustments, and maintenance performed on the monitoring system.
- v. Periods when no excess emissions have occurred.
- c. The permittee shall submit to the Division quarterly ambient monitoring data reports if required. If the limit for a given operating parameter associated with monitoring a specific control device is exceeded 6 times in any semi-annual reporting period, then any subsequent exceedance in that reporting period is a violation. For the purpose of determining the number of exceedances, no more than one exceedance shall be attributed in any given 24-hour period.
- d. If any operating or emission limit on a specific unit or operational group is exceeded more than 6 times in a specified semi-annual reporting period (as defined in **SECTION F 6.** below), the permittee shall submit a corrective action plan to the Owensboro Regional Office for the Division's approval no later than 30 days from the due date of the semi-annual report.
- e. With the exception of specific reporting requirements outlined above, the permittee shall report exceedances of any operating or emission limit specified in this permit to the Division's Owensboro Regional Office as described in **SECTION F 8.** below.

7. **Specific Control Equipment Conditions:** See **SECTION D 2. on page 32** below.

8. **Compliance Certification:** See **SECTION D 3. on page 32** below.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

SUBJECT ITEM 5 REQUIREMENTS: Green Anode Production

| Unit # | Unit Name | Rate (tons/year) | Construction Date |
|---------------------------------|---------------------|------------------|-------------------|
| M2 (1E) | Anode Mix Conveying | 127,020 | December 12, 1972 |
| M3 (2E) | Anode Mix Conveying | 127,020 | January 1, 1975 |
| M4 (3E) | Anode Mix Conveying | 127,020 | June 19, 1979 |
| M5 (6E, 7E, 8E) ^{2, 3} | Anode Mixers (3) | 54,437 | August 4, 1972 |
| M6 (9E,EA) ^{2, 3} | Anode Mixers (2) | 36,291 | July 28, 1977 |
| M7 (5E,4E) ^{2, 3} | Anode Mixers (2) | 36,291 | August 4, 1972 |

Emissions from Process units M2 thru M7 are controlled by a baghouse and dry coke scrubber (Unit # EN);

² Units M5, M6, and M7 include a common pitch scale not listed as a separate unit

³ Units M5, M6, and M7 prepare materials for two existing Presses Press 1 and Press 2

APPLICABLE REGULATIONS:

401 KAR 61:020 Existing Process Operations for Unit M2, M3, M5 and M7

401 KAR 59:010 New Process Operations for Unit M4 and M6

40 CFR 63 Subpart LL Primary Aluminum Production NESHAP

1. Operating Limitations:

- Pursuant to 40 CFR 63.843, the permittee shall install a coke scrubber with closed vent transport system to control polycyclic organic matter (POM) emissions.
- The permittee shall specify and provide the basis or rationale for selecting parameters to be monitored and the associated operating limits for the emission control device.
- If a monitoring device for a primary control device measures an operating parameter outside the limits established pursuant to 40 CFR 63.847 (h) or if visible emissions indicating abnormal operation are observed from the exhaust stack of a control device during daily inspections, the permittee shall initiate the corrective action procedures identified in the startup, shutdown, and malfunction plan within 1 hour. Failure to initiate the corrective action procedures within 1 hour or to take the necessary corrective actions to remedy the problem is a violation.
- See **SECTION D 1. on page 32** below
- The associated control device(s) shall be operated all the time when the units are in operation.

Compliance Demonstration: Records shall be kept of the times when the units are operating but the control devices are not. Records shall also be kept of the maintenance activities.

2. Emission Limitations:

- Opacity Standard:** Visible emissions shall not exceed the following limitations:
 - For equipment constructed on or after July 2, 1975: 20 % opacity.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- ii. For equipment constructed before July 2, 1975: 40 % opacity.

Compliance Demonstration: Compliance with the opacity limits described above shall be determined through monitoring, maintenance of the records and annual Method 9 readings.

- b. **PM Standards:** Hourly particulate emissions shall not exceed the following limits:

- i. For equipment constructed before July 2, 1975:

- For process weight < 30 tons/hour: $E'_{PM_i} = 4.10P_i^{0.67}$
- For process weights ≥ 30 tons/hour: $E'_{PM_i} = (55.0P_i^{0.11}) - 40$

- ii. For equipment constructed on or after July 2, 1975:

- For process weight < 30 tons/hour: $E'_{PM_i} = 3.59P_i^{0.62}$
- For process weights ≥ 30 tons/hour: $E'_{PM_i} = 17.31P_i^{0.16}$

Compliance Demonstration: Compliance with the hourly particulate emission limits described above shall be determined by comparing the allowable rate to the actual rate as calculated below:

$$E_{PM_{ij}} = \frac{P_{ij} \cdot EF_{PM_j}}{h_{ij}} \cdot \left(1 - \frac{CE_j}{100}\right)$$

Where i is the month, j is the unit, $E_{PM_{ij}}$ is the actual average hourly particulate emission rate from unit j during month i (pounds/hour), P_{ij} is the actual specific operating parameter for month i (units/month), EF_{PM_j} is the overall uncontrolled KYEIS particulate emission factor for unit j (pounds/unit), h_{ij} is the actual total hours of operation for unit j during month i (hours/month) and CE_j is the overall control efficiency (%) of any air pollution control equipment associated with unit j.

3. Testing Requirements:

- a. Pursuant to 40 CFR 63 Subpart LL, initial compliance shall be demonstrated through site inspections and review of site records by the Division.
- b. To determine compliance with visible emission limits, the permittee shall perform annual Method 9 readings on each stack, vent or control device associated with the units listed above.

4. Specific Monitoring Requirements: The permittee shall monitor the following parameters:

- a. Monthly total hours of operation.
- b. Monthly total material processed.
- c. Hourly pollutant emission rates.
- d. Continuous coke and air flow rates.
- e. For each control system:
 - i. Operating parameters.
 - ii. Daily visual inspections of the equipment.
 - iii. Daily visual qualitative visual observation of visible emissions from each control device exhaust stack.
- f. For each stack, vent or control system:

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- i. Daily observations of visible emissions during operation of associated equipment.
- ii. Observations of visible emissions during all periods of control equipment malfunction.
- iii. Annual Method 9 readings during operation of associated equipment.

5. Specific Record keeping Requirements: The permittee shall maintain records of the following information:

- a. Monthly total hours of operation
- b. Monthly total material processed.
- c. Hourly pollutant emission rates.
- d. Design information for the capture system on the dry coke scrubber.
- e. Continuous coke and air flow rates.
- f. Documentation of corrective actions taken when any operating parameter limits are exceeded.
- g. For each control system:
 - i. Operating parameters.
 - ii. Daily visual inspections of the equipment.
 - iii. Daily visual qualitative visual observation of visible emissions from each control device exhaust stack.
- h. For each stack, vent or control system, a log of all visible emission observations. If visible emissions are observed, the log shall indicate:
 - i. Method 9 readings if any visible emissions are seen.
 - ii. The cause of the abnormal visible emissions.
 - iii. Any corrective actions taken.
- i. For each stack, vent or control system, records of the annual Method 9 readings.
- j. Current startup, shutdown and malfunction (SS&M) plan.

6. Specific Reporting Requirements:

- a. The permittee shall submit to the Division notification of initial performance test, initial compliance status and compliance approach.
- b. The permittee shall submit to the Division quarterly excess emission reports (EER, excess emissions shall be defined as any measured emission rate in excess of the limitations specified herein) postmarked by the thirtieth (30th) day following the end of each quarter and containing the following information:
 - i. Periods and magnitudes of excess emissions.
 - ii. Nature and cause of each period of excess emissions.
 - iii. Periods during which the continuous monitoring system was inoperative.
 - iv. Records of calibration checks, adjustments, and maintenance performed on the monitoring system.
 - v. Periods when no excess emissions have occurred.
- c. If the limit for a given operating parameter associated with monitoring a specific control device is exceeded six times in any semi-annual reporting period, then any subsequent exceedance in that reporting period is a violation. For the purpose of determining the number of exceedances, no more than one exceedance shall be attributed in any given 24-hour period.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- d. If any operating or emission limit on a specific unit or operational group is exceeded more than 6 times in a specified semi-annual reporting period (as defined in **SECTION F 6.** below), the permittee shall submit a corrective action plan to the Owensboro Regional Office for the Division's approval no later than 30 days from the due date of the semi-annual report.
- e. With the exception of specific reporting requirements outlined above, the permittee shall report exceedances of any operating or emission limit specified in this permit to the Division's Owensboro Regional Office as described in **SECTION F 8.** below.

7. Specific Control Equipment Conditions:

- a. The fabric filters shall be operated and maintained according to manufacturer's specifications.
- b. The permittee shall maintain the dry coke scrubber such that the generally accepted engineering standards for minimum exhaust rates as published in the "Industrial Ventilation: A Handbook of Recommended Practice" are met.
- c. See **SECTION D 2. on page 32** below.

8. Compliance Certification: See **SECTION D 3. on page 32 below.**

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**SUBJECT ITEM 6 REQUIREMENTS: Anode Bake Furnaces****N2 (EE) Anode Bake Furnaces (2)****Description:** Processing rate 120,888 tons per year baked anodes.**Fuel Usage:** 450 mm scf per year natural gas usage per furnace.**Control equipment:** Baghouse/dry scrubber**Construction date:** June 19, 1979**APPLICABLE REGULATIONS:****401 KAR 59:010** New Process Operations**40 CFR 63 Subpart LL** Primary Aluminum Production NESHAP**1. Operating Limitations:**

- a. The permittee shall install and operate a device that measures and records the daily weight of green anode material introduced into the furnace and ensure that the device is calibrated according to manufacturer's specifications.
- b. The permittee shall install, operate, calibrate, and maintain a continuous parameter monitoring system for each emission control device. All monitoring devices must be calibrated in accordance with the manufacturer's instructions.
- c. The permittee shall determine upper and/or lower operating limits, as appropriate for each monitoring device for the emission control system from the values recorded during each of the runs from the initial performance test and from historical data.
- d. If a monitoring device for a primary control device measures an operating parameter outside the limits established pursuant to 63.847 (h) or if visible emissions indicating abnormal operation are observed from the exhaust stack of a control device during daily inspections, the permittee shall initiate the corrective action procedures identified in the startup, shutdown, and malfunction plan within 1 hour. Failure to initiate the corrective action procedures within 1 hour or to take the necessary corrective actions to remedy the problem is a violation.
- e. See **SECTION D 1. on page 32** below.
- f. The associated control device(s) shall be operated all the time when the units are in operation.
- g. Total natural gas usage for any 12 consecutive months should not be more than 450 mmscf per furnace.

2. Emission Limitations:

- a. **Opacity Standard:** Visible emissions from each stack or vent associated with the emission units described above shall not equal or exceed 20% opacity.
Compliance Demonstration: Compliance with the opacity limits described above shall be determined through monitoring, maintenance of the records and annual Method 9 readings.
- b. **PM Standards:** Hourly particulate emissions shall not exceed the limits:

$$E'_{PM_i} = 3.59P_i^{0.62}$$

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Where j is the unit, E'_{PMj} is the allowable particulate emission rate for unit j (pounds/hour) and P_j is the average process weight for unit j (tons/hour).

Compliance Demonstration: Compliance with the hourly particulate emission limits described above shall be determined by comparing the allowable rate to the actual rate as calculated below:

$$E_{PMij} = \frac{P_{ij} \cdot EF_{PMj}}{h_{ij}} \cdot \left(1 - \frac{CE_j}{100}\right)$$

Where i is the month, j is the unit, E_{PMij} is the actual average hourly particulate emission rate from unit j during month i (pounds/hour), P_{ij} is the actual specific operating parameter for month i (units/month), EF_{PMj} is the overall uncontrolled KYEIS particulate emission factor for unit j (pounds/unit), h_{ij} is the actual total hours of operation for unit j during month i (hours/month) and CE_j is the overall control efficiency (%) of any air pollution control equipment associated with unit j.

c. **TF& POM Standards:**

- i. Total fluoride (TF) emissions shall not exceed 0.20 lb/ton of green anode and polycyclic organic matter (POM) emissions shall not exceed 0.18 lb/ton of green anode; OR
- ii. If emission averaging is used, TF emissions shall not exceed 0.11 lb/ton of green anode and POM emissions shall not exceed 0.17 lb/ton of green anode.

Compliance Demonstration: Compliance with the limits described above shall be determined by comparing the allowable rate to the actual rate as calculated below:

$$E_{X_p} = \frac{(C_X \cdot Q)}{(453600 \cdot P_i)} \quad P_i = \frac{P'_i}{h_i}$$

Where X is the pollutant (TF or POM), E_{XP} is the actual production-based emission rate of pollutant X based on a monthly average (pounds/ton), C_X is the average total concentration of pollutant X system effluent gas (milligrams/dry standard cubic foot), Q system effluent gas flow rate (dry standard cubic feet/hour), h is the actual monthly hours of operation (hours/month), P_i is the monthly average aluminum production rate during month i (tons/hr), P'_i is the actual total aluminum production during month i (tons) and h_i is the total monthly hours of operation during month i (hours).

- d. Sulfur Dioxide emissions (see Section D Item #4)

3. **Testing Requirements:**

- a. Thirty days prior to the initial performance test, the permittee shall submit to the Division for approval a site-specific test plan that shall include:
 - i. Procedures for conducting initial and subsequent performance tests as required in 40 CFR 63.848.
 - ii. Procedures to ensure that a minimum of three test runs are performed annually for the primary control system for each source.
 - iii. Procedures for establishing the frequency of testing.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- b. Following the initial performance test, the permittee shall submit to periodic testing as prescribed in the site-specific test plan:
 - i. For each primary control system, the permittee shall perform at least three emission test runs per year.
 - ii. If the permittee has performed more than three tests of primary control system during the previous 12 consecutive months, the average of all runs performed in the previous 12-month period shall be used to determine the contribution from the primary emission control system.
 - c. The initial performance test and all subsequent performance tests shall be conducted in accordance with the requirements of the general provisions in 40 CFR Part 63 Subparts A, the procedures in 40 CFR Part 63 Subpart LL and the approved test plan.
 - d. The permittee shall use the reference methods listed in 40 CFR 63.849 to determine compliance with the applicable emission limits for TF.
 - e. To determine compliance with visible emission limits, the permittee shall perform annual Method 9 readings on each stack, vent or control device associated with the units listed above.
- 4. Specific Monitoring Requirements:** The permittee shall monitor the following parameters:
- a. Monthly total hours of operation.
 - b. Monthly total material processed.
 - c. Hourly pollutant emission rates.
 - d. Production-based pollutant emission rates.
 - e. Primary control system TF emissions (based on annual average of at least 3 runs, all valid runs must be included in average).
 - f. Primary control system POM emissions (based on annual average of at least 3 runs, all valid runs must be included in average).
 - g. Procedures for the proper operation and maintenance of monitoring device(s) or system(s) used to determine compliance, including:
 - i. The permittee shall submit recommended accuracy requirements to the DAQ for review and approval. [40 CFR 63.848 (k)]
 - ii. All monitoring devices must be certified by the permittee to meet the accuracy requirements and must be calibrated in accordance with the manufacturer's instructions. [40 CFR 63.848 (k)]
 - h. For each control system:
 - i. Operating parameters.
 - ii. Daily visual inspections of the equipment.
 - iii. Daily visual inspections of each control device exhaust stack for evidence of abnormal operation.
 - i. For each stack, vent or control system:
 - i. Daily observations of visible emissions during operation of associated equipment.
 - ii. Observations of visible emissions during all periods of control equipment malfunction.
 - iii. Annual Method 9 readings during operation of associated equipment.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**5. Specific Record keeping Requirements:** The permittee shall maintain records of the following information:

- a. Monthly total hours of operation
- b. Monthly total material processed.
- c. Hourly pollutant emission rates.
- d. Production-based pollutant emission rates.
- e. Results of all TF and POM emission tests. If an alternative test method to measure fluoride emissions is selected, records are to be maintained that demonstrate that both the particulate and gaseous portion of the fluoride pollutant are measured.
- f. If emission averaging is selected as the method used to demonstrate compliance with the emissions of TF or POM emissions, a copy of the current implementation plan shall be maintained.
- g. Documentation of corrective actions taken when any operating parameter limits are exceeded.
- h. For each control system:
 - i. Operating parameters.
 - ii. Daily visual inspections of the equipment.
 - iii. Daily visual qualitative visual observation of visible emissions from each control device exhaust stack.
- i. For each stack, vent or control system, a log of all visible emission observations. If visible emissions are observed, the log shall indicate:
 - i. Method 9 readings if any visible emissions are seen.
 - ii. The cause of the abnormal visible emissions.
 - iii. Any corrective actions taken.
- j. For each stack, vent or control system, records of the annual Method 9 readings.
- k. Current startup, shutdown and malfunction (SS&M) plan.

6. Specific Reporting Requirements:

- a. The permittee shall submit to the Division:
 - i. Notification of initial performance test, initial compliance status and compliance approach.
 - ii. The results of any stack test conducted at the source within 45 days of the completion of any fieldwork associated with the test.
 - iii. An annual summary of all performance tests.
- b. The permittee shall submit for the Division's approval a plan to ensure that each piece of associated control equipment is properly operated and maintained. The plan shall include the following information:
 - i. The operating parameters to be monitored.
 - ii. Acceptable ranges or limits for each operating parameter.
 - iii. The monitoring frequency for each parameter.
 - iv. The criteria used to select each parameter, range, limit and frequency including how each of these relates to emission control.
 - v. The recommended accuracy requirements for each monitoring device.
- c. The permittee shall submit to the Division quarterly excess emission reports (EER, excess emissions shall be defined as any measured emission rate in excess of the

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

limitations specified herein) postmarked by the thirtieth (30th) day following the end of each quarter and containing the following information:

- i. Periods and magnitudes of excess emissions.
 - ii. Nature and cause of each period of excess emissions.
 - iii. Periods during which the continuous monitoring system was inoperative.
 - iv. Records of calibration checks, adjustments, and maintenance performed on the monitoring system.
 - v. Periods when no excess emissions have occurred.
- f. If the limit for a given operating parameter associated with monitoring a specific control device is exceeded six times in any semi-annual reporting period, then any subsequent exceedance in that reporting period is a violation. For the purpose of determining the number of exceedances, no more than one exceedance shall be attributed in any given 24-hour period.
- g. If any operating or emission limit on a specific unit or operational group is exceeded more than 6 times in a specified semi-annual reporting period (as defined in **SECTION F 6.** below), the permittee shall submit a corrective action plan to the Owensboro Regional Office for the Division's approval no later than 30 days from the due date of the semi-annual report.
- h. With the exception of specific reporting requirements outlined above, the permittee shall report exceedances of any operating or emission limit specified in this permit to the Division's Owensboro Regional Office as described in **SECTION F 8.** below.

7. Specific Control Equipment Conditions:

- a. The baghouses and dry scrubber filters shall be operated and maintained according to manufacturer's specifications.
- b. See **SECTION D 2. on page 32** below.

8. Compliance Certification:

- a. See **SECTION D 3. on page 32** below.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

SUBJECT ITEM 7 REQUIREMENTS: Holding Furnaces

| Unit # | Unit Name | Control | Construction Date |
|-------------|---|---------|-------------------|
| F1 (I1-I6) | Holding Furnaces (6) with In-Line Degassers | None | August 4, 1972 |
| F2 (I7, I8) | Holding Furnaces (2) with In-Line Degassers | None | August 4, 1979 |

APPLICABLE REGULATIONS:

401 KAR 59:010 New process operations for unit F2

401 KAR 61:020 Existing process operations for unit F1

40 CFR Part 63 Subpart RRR Secondary aluminum production NESHAP

1. Operating Limitations:

- The permittee shall use only clean charge.
- The permittee shall maintain a reactive flux injection rate at or below rate used during the performance test for each operating cycle or time period used in the performance test.
- The permittee shall install and operate a device that measures and records the weight of all materials fed/charged and/or aluminum produced to an accuracy of $\pm 1\%$. The weight measurement device shall be calibrated according to manufacturer's specifications or at least once every 6 months.
- The permittee shall provide and maintain easily visible labels posted at each emission unit that identify the applicable emission limits and the means of compliance.
- See **SECTION D 1. on page 32** below.

2. Emission Limitations:

- Opacity Standard:** Visible emissions shall not exceed the following limitations:

- For equipment constructed on or after July 2, 1975: 20 % opacity.
- For equipment constructed before July 2, 1975: 40 % opacity.

Compliance Demonstration: Compliance with the opacity limits described above shall be determined through monitoring, maintenance of the records and annual Method 9 readings.

- PM Standards:** Particulate emissions shall not exceed the following limits:

- For equipment constructed before July 2, 1975:

- For process weight < 30 tons/hour: $E'_{PM_i} = 4.10P_i^{0.67}$
- For process weights ≥ 30 tons/hour: $E'_{PM_i} = (55.0P_i^{0.11}) - 40$

- For equipment constructed on or after July 2, 1975:

- For process weight < 30 tons/hour: $E'_{PM_i} = 3.59P_i^{0.62}$
- For process weights ≥ 30 tons/hour: $E'_{PM_i} = 17.31P_i^{0.16}$

Compliance Demonstration: Compliance with the hourly particulate emission limits described above shall be determined by comparing the allowable rate to the actual rate as calculated below:

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

$$E_{PM_{ij}} = \frac{P_{ij} \cdot EF_{PM_j}}{h_{ij}} \cdot \left(1 - \frac{CE_j}{100}\right)$$

Where i is the month, j is the unit, $E_{PM_{ij}}$ is the actual average hourly particulate emission rate from unit j during month i (pounds/hour), P_{ij} is the actual specific operating parameter for month i (units/month), EF_{PM_j} is the overall uncontrolled KYEIS particulate emission factor for unit j (pounds/unit), h_{ij} is the actual total hours of operation for unit j during month i (hours/month) and CE_j is the overall control efficiency (%) of any air pollution control equipment associated with unit j.

- c. Pursuant to 40 CFR 63 Subpart RRR, emissions from any Group 1 Furnace shall not exceed the following limits:
 - i. Particulate emissions shall not exceed 0.4 lbs/ton of feed.
 - ii. Hydrochloric acid (HCl) emissions shall not exceed 0.4 lbs/ton of feed.
- d. Pursuant to 40 CFR 63 Subpart RRR, emissions from any In-Line Fluxer shall not exceed the following limits:
 - i. Particulate emissions from shall not exceed 0.01 lbs/ton of feed.
 - ii. Hydrochloric acid (HCl) emissions shall not exceed 0.04 lbs/ton of feed.
- e. Pursuant to 40 CFR 63 Subpart RRR, the source has a choice to limit emissions from Group 1 Furnaces and In-Line Fluxers on an individual basis (as in 2.c. and 2.d. above) or as part of a Secondary Aluminum Processing Unit (SAPU).
 - i. If each existing Group 1 Furnace and In-Line Fluxer is in compliance with individual emission limits, then the SAPU shall be considered to be in compliance and the three-day rolling calculation shall not be required.

Compliance Demonstration: Compliance with the limits described in **2.c.** and **2.d.** above shall be determined by comparing the allowable rate to the actual rate as calculated below:

$$E_{X_p} = \frac{E_X}{P}$$

Where X is the pollutant, E_{X_p} is production-based emission rate of each limited pollutant (pounds/ton aluminum charged), E_X is the actual hourly emission rate of pollutant X as determined during a performance test (pounds/hour) and P is the actual total aluminum charged during the performance test (tons/hour).

- ii. If the source cannot or chooses not to demonstrate compliance with the individual limits, the permittee shall maintain a 3-day rolling average of the SAPU emission limits.
- iii. SAPU emission limits for each pollutant shall be determined by applying the following equation:

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

$$E'_X = \frac{\sum_{j=1}^n (L_{X_j} \cdot P_j)}{\sum_{j=1}^n (P_j)}$$

Where j is the unit, n is the total number of units in the SAPU, X is the specific pollutant, E'_X is the allowable SAPU emissions for pollutant X (pounds/ton material charged), L_{X_j} is the emission limit for pollutant X specific to unit j (pounds/tons material charged), and P_j is the operating rate for unit j (tons material charged/hour).

Compliance Demonstration: The 3-day rolling average for an individual SAPU shall be calculated with the following equations:

$$E_X = \frac{\sum_{i=1}^3 E_{X_i}}{3} \quad E_{X_i} = \frac{\sum_{j=1}^n E_{X_j} \cdot P_{ij}}{\sum_{j=1}^n P_{ij}}$$

Where i is the day, j is the unit, n is the total number of units in SAPU, X is the pollutant, E_X is the 3-day rolling average emissions of pollutant X (pounds/tons material processed), E_{X_i} is the estimated actual emissions from the SAPU on day i (pounds/tons material charged), E_{X_j} is the measured emission rate of pollutant X from emission unit j as determined in the performance test (pounds/ton of material processed), and P_{ij} is the total amount of material processed in unit j on day i (tons).

3. **Testing Requirements:**

- The permittee shall demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard for each affected source and emission unit as per 40 CFR 63, Subpart RRR, sections 63.1511 and 63.1512(e) and (h).
- The permittee shall conduct performance tests every 5 years following the initial compliance test.
- To determine compliance with visible emission limits, the permittee shall perform annual Method 9 readings on each stack, vent or control device associated with the units listed above.

4. **Specific Monitoring Requirements:** The permittee shall monitor the following parameters:

- Monthly total hours of operation.
- Monthly total aluminum production.
- Hourly pollutant emission rates.
- Production-based pollutant emission rates.
- For each operating cycle or time period used in the performance test, the following parameters:
 - Total fluxing hours per operating cycle.
 - Total HCl added by weight per operating cycle.
 - Hourly fluxing rate (based on operating cycle average).
 - Other parameters needed to perform alternative flux injection rate determination as described in 40 CFR Part 63 Subpart RRR section 63.1510(j)(5).

**SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS,
AND OPERATING CONDITIONS (CONTINUED)**

- f. Weight measurement device calibrations.
- g. Monthly inspections of equipment labels.
- h. For each stack, vent or control system:
 - i. Monthly observations of visible emissions during operation of associated equipment.
 - ii. Observations of visible emissions during all periods of control equipment malfunction.
 - iii. Annual Method 9 readings during operation of associated equipment.

5. Specific Record keeping Requirements: The permittee shall maintain records of the following information:

- a. Monthly total hours of operation.
- b. Monthly total aluminum production.
- c. Hourly pollutant emission rates.
- d. Production-based pollutant emission rates.
- e. Parameters for determining fluxing rate.
- f. Weight measurement device calibrations.
- g. Monthly inspections of equipment labels.
- h. For each stack, vent or control system, a log of all visible emission observations. If visible emissions are observed, the log shall indicate:
 - i. Method 9 readings if any visible emissions are seen.
 - ii. The cause of the abnormal visible emissions.
 - iii. Any corrective actions taken.
- i. For each stack, vent or control system, records of the annual Method 9 readings.

6. Specific Reporting Requirements:

- a. The permittee shall report to the Division pursuant to 40 CFR 63 Subpart RRR, sections 63.1515, Notifications and 63.1516, Reports.
- b. With the exception of specific reporting requirements outlined above, the permittee shall report exceedances of any operating or emission limit specified in this permit to the Division's Owensboro Regional Office as described in **SECTION F 8.** below.

7. Specific Control Equipment Conditions: See **SECTION D 2.** on page 32 below.

8. Compliance Certification:

- a. The permittee shall submit semi-annual certification to the Division that only clean charge was used in the furnaces.
- b. See **SECTION D 3.** on page 32 below.

**SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS,
AND OPERATING CONDITIONS (CONTINUED)**

SUBJECT ITEM 8 REQUIREMENTS: Roads

EP (EP) Unpaved Roads

Control equipment: None

Construction date: 1972

APPLICABLE REGULATIONS:

401 KAR 63:010 Fugitive emissions

1. Operating Limitations: None

2. Emission Limitations:

- a. The permittee shall not cause or permit the discharge of visible fugitive dust emissions beyond the lot line of the property on which the emissions originate
- b. The permittee shall take reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when applicable, but not be limited to the following:
 - i. Application and maintenance of asphalt, water, or suitable chemicals on roads, material stockpiles, and other surfaces that are sources of airborne dusts.
 - ii. The use of water sprays or other measures to suppress the dust emissions during handling.

3. Testing Requirements: None

4. Specific Monitoring Requirements: The permittee shall monitor the time, date, and type of precaution taken to prevent particulate matter from becoming airborne.

5. Specific Record keeping Requirements: The permittee shall maintain records of the precautions taken to prevent fugitive dust.

6. Specific Reporting Requirements: See SECTION F below.

7. Specific Control Equipment Conditions: None

8. Compliance Certification: See SECTION D 3. on page 32 below.

SECTION B – AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**SUBJECT ITEM 9 REQUIREMENTS: Natural Gas Usage**

| Unit # | Unit Name | Rate | Units | Construction Date |
|----------|----------------------|------|----------|-------------------|
| A6 (90) | Re-Melt Furnace | 64 | MMBTU/hr | August 1, 1999 |
| H1 (1I) | Homogenizing Furnace | 13.5 | MMBTU/hr | March 1990 |
| H2 (2I) | Homogenizing Furnace | 13.5 | MMBTU/hr | March 1990 |
| H3 (3I) | Homogenizing Furnace | 13.5 | MMBTU/hr | March 1990 |
| H4 (I31) | Homogenizing Furnace | 14.0 | MMBTU/hr | December 29, 2000 |

APPLICABLE REGULATIONS:

401KAR 59:010: New process operations

1. **Operating Limitations:** Natural gas should be only fuel to be used for the units defined in Subject Item 9.
2. **Emission Limitations:**
 - i. The visible emissions shall not exceed 20% opacity.
 - ii. The Particulate Matter emission shall not be more than 2.34 lb/hr.

Compliance Demonstration: The permittee is assumed to be in compliance, with the particulate matter limit, while burning natural gas.
3. **Testing Requirements:** None
4. **Specific Monitoring Requirements:** The permittee shall monitor source-wide natural gas usage on a monthly basis.
5. **Specific Record keeping Requirements:** The permittee shall maintain records of monthly source-wide natural gas usage.
6. **Specific Reporting Requirements:** None
7. **Specific Control Equipment Conditions:** None
8. **Compliance Certification:** See SECTION D 3. on page 32 below.

SECTION C – INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. While these activities are designated as insignificant the permittee must comply with the applicable regulation and some minimal level of periodic monitoring may be necessary.

| Description | Generally Applicable Regulation |
|--|---------------------------------------|
| 1. Emergency Generator (Natural gas) (Unit# RW-RCW-26-EMG)- 230kW | 401 KAR 61:020 |
| 2. Anode cover storage T34 (DC), T35 (DC) | 401 KAR 59:010 |
| 3. 4 Boilers (A2, A3, A4, 4I) - 1.26 to 1.89 MMBTU/hr (Natural Gas) | 401 KAR 59:015 |
| 4. Chip handling system (5I) | None |
| 5. Indirect waste oil heat exchanger (A5) | 401 KAR 59:015 |
| 6. Electrostatic stub coating (EK) | 401 KAR 59:010 |
| 7. Maintenance Area 046- Wood/Refractory Saw (AI) | 401 KAR 61:020 |
| 8. Refractory/Carbon Saw – Maintenance Saw (EH) | 401 KAR 59:010 |
| 9. Propane vaporizer boiler | 401 KAR 59:015 |
| 10. Gasoline storage fuel tank vent | 401 KAR 59:050 |
| 11. Diesel storage fuel tank vent | 401 KAR 59:050 |
| 12. Small form control oven (Natural Gas) | 401 KAR 59:010 |
| 13. A446 Day Tank Vent Filter | 401 KAR 59:010 |

SECTION D – SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.

1. The permittee shall follow the requirements described in the preventative maintenance plan for all units. Excursion from the requirements of the preventative maintenance plan shall be corrected in a timely manner per 401 KAR 50:055 section 1, (4).
2. The facility shall maintain all control device equipment in accordance with the Preventative Maintenance Plan. This plan establishes maintenance management systems which ensures the continuing control capability of pollution control devices in use at the facility. This plan includes inspection and maintenance work orders on a schedule determined by the O&M requirements and internal maintenance standards, determined by technical, engineering, operations personnel which follow manufacturer's guidelines for operation and maintenance.
3. Sulfur Dioxide Emissions: Sulfur dioxide (SO₂) emissions shall not exceed 5,262.3 total tons in any 12-month consecutive period, from the production of primary aluminum by electrolysis (potline operations) and anode bake furnace operations (Synthetic Minor Limit).
Compliance Demonstration: Compliance with the annual SO₂ emission limit shall be determined by computing the total primary aluminum production SO₂ emissions monthly using the Alcan SO₂ Calculation Engine (an example of the form can be found in the Kentucky Division for Air Quality tracking system "TEMPO"); and calculating a rolling 12-month SO₂ emission total for the primary aluminum process (potlines and anode baking furnaces).
4. The permittee shall follow the operation and monitoring requirements implemented in the site-specific OM& M plan for group furnaces: Holding Furnaces (F1(I1-I6), F2(I7-I8)) and group 2 furnace: Re-melt Furnace (A6(89)).

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b (IV)1 of the Cabinet Provisions and Procedures for Issuing Title V Permits incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
 - a. Date, place as defined in this permit, and time of sampling or measurements;
 - b. Analyses performance dates;
 - c. Company or entity that performed analyses;
 - d. Analytical techniques or methods used;
 - e. Analyses results; and
 - f. Operating conditions during time of sampling or measurement.
2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b(IV) 2 and 1a(8) of the Cabinet Provisions and Procedures for Issuing Title V Permits incorporated by reference in 401 KAR 52:020, Section 26].
3. In accordance with the requirements of 401 KAR 52:020 Section 3(1)h the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
 - a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
 - b. To access and copy any records required by the permit;
 - c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.
4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.
5. Summary reports of any monitoring required by this permit, other than continuous emission or opacity monitors, shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Section 1b (V)1 of the Cabinet Provisions and Procedures for Issuing Title V Permits incorporated by reference

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

in 401 KAR 52:020, Section 26].

6. The semi-annual reports are due by January 30th and July 30th of each year. Data from the continuous emission and opacity monitors shall be reported to the Technical Services Branch in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All reports shall be certified by a responsible official pursuant to 401 KAR 52:020 Section 23. All deviations from permit requirements shall be clearly identified in the reports.
7. In accordance with the provisions of 401 KAR 50:055, Section 1 the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
 - a. When emissions during any planned shutdowns and ensuing startups will exceed the standards notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
 - b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall submit written notice upon request.
8. The owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Section F.7. above) to the Regional Office listed on the front of this permit within 30 days. Other deviations from permit requirements shall be included in the semiannual report required by Section F.6 [Section 1b (V) 3, 4. of the Cabinet Provisions and Procedures for Issuing Title V Permits incorporated by reference in 401 KAR 52:020, Section 26].
9. Pursuant to 401 KAR 52:020, Permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
 - a. Identification of the term or condition;
 - b. Compliance status of each term or condition of the permit;
 - c. Whether compliance was continuous or intermittent;
 - d. The method used for determining the compliance status for the source, currently and over the reporting period.
 - e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

- f. The certification shall be postmarked by January 30th of each year. Annual compliance certifications should be mailed to the following addresses:

Division for Air Quality
Owensboro Regional Office
3032 Alvey Park Drive W., Suite 700
Owensboro, KY 42303-7304

U.S. EPA Region IV
Air Enforcement Branch
Atlanta Federal Center
61 Forsyth St.
Atlanta, GA 30303-8960

Division for Air Quality
Central Files
803 Schenkel Lane
Frankfort, KY 40601

10. In accordance with 401 KAR 52:020, Section 22, the permittee shall provide the Division with all information necessary to determine its subject emissions within thirty (30) days of the date the KYEIS emission survey is mailed to the permittee.
11. Pursuant to 401 KAR 50:045, performance testing required by the permit shall be conducted according to the timeline listed in 401 KAR 50:045. The division requires that results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days after the completion of the fieldwork.

SECTION G - GENERAL PROVISIONS**(a) General Compliance Requirements**

1. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020 and of the Clean Air Act and is grounds for enforcement action including but not limited to termination, revocation and reissuance, revision or denial of a permit [Section 1a, 3 of the Cabinet Provisions and Procedures for Issuing Title V Permits incorporated by reference in 401 KAR 52:020 Section 26].
2. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a, 6 of the Cabinet Provisions and Procedures for Issuing Title V Permits incorporated by reference in 401 KAR 52:020, Section 26].
3. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
 - a. If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
 - b. The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
 - c. The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit;

Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

4. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or compliance with the conditions of this permit [Section 1a, 7,8 of the Cabinet Provisions and Procedures for Issuing Title V Permits incorporated by reference in 401 KAR 52:020, Section 26].

SECTION G - GENERAL PROVISIONS (CONTINUED)

5. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].
6. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a, 14 of the Cabinet Provisions and Procedures for Issuing Title V Permits incorporated by reference in 401 KAR 52:020, Section 26].
7. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a, 4 of the Cabinet Provisions and Procedures for Issuing Title V Permits incorporated by reference in 401 KAR 52:020, Section 26].
8. Except for requirements identified in this permit as state-origin requirements, all terms and conditions shall be enforceable by the United States Environmental Protection Agency and citizens of the United States [Section 1a, 15 of the Cabinet Provisions and Procedures for Issuing Title V Permits incorporated by reference in 401 KAR 52:020, Section 26].
9. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a, 10 of the Cabinet Provisions and Procedures for Issuing Title V Permits incorporated by reference in 401 KAR 52:020, Section 26].
10. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3)(b)].
11. This permit does not convey property rights or exclusive privileges [Section 1a, 9 of the Cabinet Provisions and Procedures for Issuing Title V Permits incorporated by reference in 401 KAR 52:020, Section 26].
12. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Kentucky Cabinet for Natural Resources and Environmental Protection or any other federal, state, or local agency.
13. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3)(d)].
14. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3)(a)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

15. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.
16. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of issuance. Compliance with the conditions of a permit shall be considered compliance with:
 - a. Applicable requirements that are included and specifically identified in the permit and
 - b. Non-applicable requirements expressly identified in this permit.
17. Pursuant to 401 KAR 50:045, Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least Thirty (30) days prior to the test.

(b) Permit Expiration and Reapplication Requirements

1. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].
2. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:020 Section 8(2)].

(c) Permit Revisions

1. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).
2. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided

SECTION G - GENERAL PROVISIONS (CONTINUED)

that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

(d) Construction, Start-Up, and Initial Compliance Demonstration Requirements

Q2 (EF) Electric Induction Furnace (No. 3) (2006)

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the construction of the equipment described herein, emission points Q2 in accordance with the terms and conditions of this permit.

1. Construction of any process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.
2. Within thirty (30) days following commencement of construction and within fifteen (15) days following start-up and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Regional Office listed on the front of this permit in writing, with a copy to the Division's Frankfort Central Office, notification of the following:
 - a. The date when construction commenced.
 - b. The date of start-up of the affected facilities listed in this permit.
 - c. The date when the maximum production rate specified in the permit application was achieved.
3. Pursuant to 401 KAR 52:020, Section 3(2), unless construction is commenced within eighteen (18) months after the permit is issued, or begins but is discontinued for a period of eighteen (18) months or is not completed within a reasonable timeframe then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon written request, the Cabinet may extend these time periods if the source shows good cause.
4. For those affected facilities for which construction is authorized by this permit, a source shall be allowed to construct with the proposed permit. Operational or final permit approval is not granted by this permit until compliance with the applicable standards specified herein has been demonstrated pursuant to 401 KAR 50:055. If compliance is not demonstrated within the prescribed timeframe provided in 401 KAR 50:055, the source shall operate thereafter only for the purpose of demonstrating compliance, unless otherwise authorized by Section I of this permit or order of the Cabinet.
5. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance

SECTION G - GENERAL PROVISIONS (CONTINUED)

test on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Provisions G(d)7 of this permit and the permittee must furnish to the Division for Air Quality's Frankfort Central Office a written report of the results of such performance test.

6. Terms and conditions in this permit established pursuant to the construction authority of 401 KAR 51:017 or 401 KAR 51:052 shall not expire.
7. Pursuant to 401 KAR 50:045 Section 5 in order to demonstrate that a source is capable of complying with a standard at all times, a performance test shall be conducted under normal conditions that are representative of the source's operations and create the highest rate of emissions. If [When] the maximum production rate represents a source's highest emissions rate and a performance test is conducted at less than the maximum production rate, a source shall be limited to a production rate of no greater than 110 percent of the average production rate during the performance tests. If and when the facility is capable of operation at the rate specified in the application, the source may retest to demonstrate compliance at the new production rate. The Division for Air Quality may waive these requirement on a case-by-case basis if the source demonstrates to the Division's satisfaction that the source is in compliance with all applicable requirements.

(e) Acid Rain Program Requirements

1. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

(f) Emergency Provisions

1. Pursuant to 401 KAR 52:020 Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
 - a. An emergency occurred and the permittee can identify the cause of the emergency;
 - b. The permitted facility was at the time being properly operated;
 - c. During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
 - d. Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.01-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.

SECTION G - GENERAL PROVISIONS (CONTINUED)

- e. This requirement does not relieve the source of other local, state or federal notification requirements.
- 2. Emergency conditions listed in General Condition (f)1 above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].
- 3. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].
- (g) Risk Management Provisions
 - 1. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:
RMP Reporting Center
P.O. Box 3346
Merrifield, VA, 22116-3346
 - 2. If requested, submit additional relevant information to the Division or the U.S. EPA.
- (h) Ozone depleting substances
 - 1. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
 - a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
 - b. Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
 - c. Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
 - d. Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166
 - e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
 - f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

SECTION G - GENERAL PROVISIONS (CONTINUED)

2. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

SECTION H – ALTERNATE OPERATION SCENARIOS

None

SECTION I – COMPLIANCE SCHEDULE

None